

Coastal GeoTools '05
Myrtle Beach, South Carolina
March 7 to 10, 2005

Dear Colleagues:

We are living and working in an increasingly technological world. Coastal GeoTools '05 will be an important occasion for coastal resource management professionals to share their rapidly expanding technical knowledge and experiences.

The fourth biennial edition of this exciting conference focuses on real-life coastal applications of geographic information systems (GIS), remote sensing, and decision-support tools, as well as the development of the National Spatial Data Infrastructure.

Attendees will walk away from GeoTools better prepared to incorporate technology into their decision-making processes—and inspired to participate in the coastal management technical evolution.

The new venue for GeoTools—Myrtle Beach, South Carolina—is also a source of excitement. When not learning about cutting-edge technologies, conference attendees can take advantage of all that the “sun fun capital of the East Coast” has to offer, ranging from an abundance of golfing and shopping, to miles of Carolina coastline.

Don't miss this opportunity to learn, share, and have fun.

Sincerely,

A handwritten signature in black ink, appearing to read "Margaret Davidson". The signature is fluid and cursive, with a large initial "M" and a long, sweeping underline.

Margaret Davidson
Director
NOAA Coastal Services Center

**GEOTOOLS '05 GOLF TOURNAMENT
ARCADIAN SHORES
SUNDAY, MARCH 6, 2005**

Preliminary Conference Program

MONDAY, MARCH 7, 2005

Make the most of the first day of Coastal GeoTools '05 by attending one of the training sessions or special interest meetings. They are free of charge, but registration is required and space is limited.

TRAINING: COASTAL APPLICATIONS OF TIDES AND VERTICAL DATUMS

8:30 to 11:30 a.m.

This course presents an overview of the end-to-end process for acquiring and applying vertical reference systems. It is geared toward people using tidal, LIDAR, and GPS measurements and explains how to apply the information more effectively to coastal issues. Students will learn the basics of tides, tidal observation and tidal datum determination, geodesy, geodetic observation, and geodetic datums. Case studies and examples are used to showcase the variety of applications and to illustrate how important known and consistent vertical reference systems are to the successful use of GIS. Applications include maritime boundaries, wetland restoration, coastal inundation from storm surge or sea level rise, land subsidence mapping, shoreline determination, and bathymetric surveys.

TRAINING: INTRODUCTION TO REMOTE SENSING

8:30 to 11:30 a.m.

Remote sensing image data provide a unique perspective on environmental features and conditions. As access to remote sensing data increases, there are more data streams and options becoming available. This seminar provides an overview of remote sensing concepts and technologies, and addresses their uses as decision-making tools for managing spatial resources. The overview will cover topics essential to an understanding of the remote sensing process, including the basics of electromagnetic energy and its interaction with the environment, various types of image data (sensor systems and platforms) that are available, benefits and limitations of including remote sensing data, and examples of applying derived data to other GIS data in a decision-support system.

TRAINING: METADATA – THE NEXT STEP

8:30 to 11:30 a.m.

OK, so you know what metadata is and why it is important. Now what do you do? This session will help answer that question by looking at ways to implement a metadata program for your organization. Topics will include making metadata a part of your internal data management structure, establishing protocols and standard operating procedures to aid in staff buy-in and contractor consistency, and using tools to make the process of writing metadata as painless and efficient as possible.

SPECIAL INTEREST MEETING: COMPREHENSIVE HURRICANE PREPAREDNESS STUDY – GIS TOOLS AND APPLICATIONS

1:00 to 4:30 p.m.

The Federal Emergency Management Agency (FEMA), U.S. Army Corps of Engineers, NOAA Coastal Services Center, and their state and local partners involved in emergency management and mitigation planning for tropical cyclone events will meet regarding the development of the new Comprehensive Hurricane Preparedness Study and the products that will be produced as a result. Though this will be a meeting of the project partners, others interested in hurricane preparedness are welcome to attend. The objective is to explore additional ways GIS tools can assist FEMA and local communities throughout the hurricane-prone areas of the U.S. and its territories in their preparedness, response, and recovery efforts.

SPECIAL INTEREST MEETING: FGDC MARINE AND COASTAL SPATIAL DATA SUBCOMMITTEE

1:00 to 4:30 p.m.

The Federal Geographic Data Committee's (FGDC) Marine and Coastal Spatial Data Subcommittee will hold a special interest meeting at the Coastal GeoTools conference. Topics will include the subcommittee's role in building the Marine and Coastal National Spatial Data Infrastructure; how the subcommittee is responding to the recent U.S. Commission on Ocean Policy and National Research Council recommendations; and other current activities. This is an opportunity to learn more about the subcommittee and how your organization might participate.

SPECIAL INTEREST MEETING: IDENTIFYING GEOSPATIAL TECHNOLOGY REQUIREMENTS IN THE GREAT LAKES AND GULF COAST REGIONS

1:00 to 4:30 p.m.

Details coming soon.

SPECIAL INTEREST MEETING: REMOTE SENSING OF COASTAL WATER QUALITY

1:00 to 4:30 p.m.

The NOAA Coastal Services Center has recently conducted a comparison of operational remote sensing technologies to measure water quality in nearshore waters. The Center contracted with four groups to collect measurements, using different types of remote sensing instruments, along the Patuxent River in Maryland. The groups measured chlorophyll concentrations, total suspended solids, and sea surface temperature. The Center plans to present a comparison of all of these data sets at this special interest meeting. The meeting will also be a forum for a discussion of the pros and cons of each approach. Managers, vendors, and scientists will all have an opportunity to ask questions, display findings, and discuss the current abilities the community has in this area.

WELCOME RECEPTION – EXHIBITOR RECEPTION AND POSTER SESSION

6:00 to 8:00 p.m.

Meet the exhibitors and poster presenters in the Cambridge and Westminster Hall areas at Kingston Plantation for an informal reception and viewing of the exhibits and posters to be displayed at the conference. Light hors d'oeuvres and a cash bar will be provided.

TUESDAY, MARCH 8, 2005

WELCOME AND KEYNOTE ADDRESS

8:30 to 10:00 a.m.

NOAA COASTAL SERVICES CENTER WELCOME

Nicholas Schmidt, Chief, Coastal Information Services, NOAA Coastal Services Center, Charleston, South Carolina

NOAA WELCOME

Margaret A. Davidson, Director, NOAA Coastal Services Center, Charleston, South Carolina

Ms. Davidson earned her juris doctorate (J.D. degree) in natural resources law from Louisiana State University and her master's degree in marine policy and resource economics from the University of Rhode Island. After a two-year stint as the acting Assistant Administrator of NOAA's National Ocean Service, she has returned to the position of Director of the NOAA Coastal Services Center.

KEYNOTE ADDRESS

Dr. Michael Goodchild, Professor of Geography at the University of California, Santa Barbara, and Director of the National Center for Geographic Information and Analysis (NCGIA).

Dr. Goodchild has a B.A. in physics from Cambridge University and a Ph.D. in geography from McMaster University. He taught from 1969 to 1988 at the University of Western Ontario and has been at the University of California, Santa Barbara, since 1988. He has written and lectured widely on spatial analysis and geographic information systems (GIS). His recent research and published work is on the topics of error and uncertainty in spatial data, spatial analysis in social sciences, and GIS and environmental modeling.

BREAK

10:00 to 10:30 a.m.

CONCURRENT SESSIONS

10:30 a.m. to 12:00 p.m.

Remote Sensing Track: High Resolution Data

Coastal Mapping and Shoreline Change Track: Shoreline Stabilization

Coastal Hazards Track: Assessing Vulnerability

Land Use and Community Planning Track: Social Science Applications

INTERACTIVE EXHIBITOR/POSTER LUNCH IN THE KENSINGTON BALLROOM

12:00 to 1:30 p.m.

CONCURRENT SESSIONS

1:30 to 3:00 p.m.

Benthic Mapping Track: Benthic Mapping Techniques I

Coastal Mapping and Shoreline Change Track: Shoreline Databases

Coastal Hazards Track: Coastal Hazards

Data Sharing Track: Data Sharing I

BREAK

3:00 to 3:30 p.m.

CONCURRENT SESSIONS

3:30 to 5:00 p.m.

Benthic Mapping Track: Benthic Mapping Techniques II

Coastal Mapping and Shoreline Change Track: Shoreline Tools

Visualization Methods

Data Sharing Track: Data Sharing II

WEDNESDAY, MARCH 9, 2005

CONCURRENT SESSIONS

8:30 to 10:00 a.m.

Benthic Mapping Track: Benthic Mapping Techniques III

Coastal Mapping and Shoreline Change Track: Coastal Mapping Technologies

Information Technology for Managers Track: Internet Mapping

Land Use and Community Planning Track: Water Quality Tools

BREAK

10:00 to 10:30 a.m.

CONCURRENT SESSIONS

10:30 a.m. to 12:00 p.m.

Benthic Mapping Track: Habitat Restoration Planning

Coastal Mapping and Shoreline Change Track: Land Cover and Change

Data Sharing Track: Data Sharing III

Marine Protected Areas Tools

PLENARY LUNCH

12:00 p.m. to 2:30 p.m.

Dr. Richard Spinrad, Assistant Administrator, NOAA National Ocean Service, Silver Spring, Maryland

CONCURRENT SESSIONS

2:30 to 4:00 p.m.

Remote Sensing Track: Remote Sensing Coasts & Oceans

Integrated Ocean Observing Systems Track: Ocean Observations for Coastal Managers

Benthic Mapping Track: Habitat Restoration – Remediation

Information Technology for Managers Track: Information Technology for Managers

VISIT THE EXHIBITOR HALL

4:00 to 5:00 p.m.

The Exhibitor Hall will feature up to 25 exhibits from both the private and government sectors that will showcase geospatial information technologies for coastal planning and resource management. The exhibits will provide an educational venue for agencies and vendors to display their newest technologies and programs. For more information about exhibiting, contact Lynn Sellers at (843) 740-1284 or Lynn.Sellers@noaa.gov.

RECEPTION IN THE PALMETTOS PAVILION

7:00 to 10:00 p.m.

Conference attendees will be treated to a private “Beach Bash” in the Palmettos Pavilion at Kingston Plantation. The reception will include heavy hors d'oeuvres and a cash bar. Entertainment will be provided by “too MUCH Sylvia”—a high-energy, beach music band. So get ready to get sand in your shoes and shag the night away.

No transportation is needed . . . just walk out the back of the Kingston Plantation. Feel free to bring your spouse or friend, but please note that additional guests will incur an added cost of \$50 a person. Attire is casual.

THURSDAY, MARCH 10, 2005

CONCURRENT SESSIONS

9:00 to 10:30 a.m.

Benthic Mapping Track: Modeling Benthic Systems

Coastal Mapping and Shoreline Change Track: Shoreline Survey Methods

Integrated Ocean Observing Systems Track: Ocean Observations – Data & Management

Land Use and Community Planning Track: Impacts to Resources

BREAK

10:30 to 11:00 a.m.

CONCURRENT SESSIONS

11:00 a.m. to 12:30 p.m.

Remote Sensing Track: Remote Sensing with LIDAR

Fisheries & Protected Species

Benthic Mapping Track: Marsh, Kelp & SAV

Land Use and Community Planning Track: Visualizing Change

CONFERENCE REGISTRATION

Registration is required for all attendees, and early registration is strongly recommended due to space limitations (we sold out at previous GeoTools). Please note that there will be no on-site registration and no sharing of registrations.

The registration fee covers the Monday evening Welcome and Exhibitor Reception with cash bar, the Tuesday and Wednesday luncheons, the Tuesday evening Beach Bash, all morning and afternoon refreshments, and all conference materials. Please take advantage of the Kingston Plantation's complimentary breakfast. The conference will not be serving coffee until the morning break.

Registrations postmarked by December 31, 2004: \$330

Registrations postmarked January 1, 2005, to January 31, 2005: \$360

Payment for Coastal GeoTools '05 may be in the form of a check or money order, made payable to Charleston Events, LLC, or by credit card. Sorry, no purchase orders will be accepted. If paying by credit card, please copy the registration form, complete the appropriate information, and mail or fax to Charleston Events, LLC, at the address listed below.

Please mail your completed registration form (see insert) with full payment, or fax your registration form with credit card information, to

Charleston Events, LLC
P.O. Box 30383
Charleston, SC 29417-0383
Phone: (843) 740-1284
FAX: (843) 740-1316

You should receive confirmation of your registration within one week. All conference registration changes or cancellations must be made in writing via mail or fax. Refunds less a processing fee of \$50.00 will be given if cancellation is made prior to January 31, 2005. Although substitution of conference participants may be made after January 31, 2005, no refunds will be made after this date.

ACCOMMODATIONS

Coastal GeoTools '05 will be held at the Kingston Plantation in Myrtle Beach, South Carolina. This 145-acre beach resort offers a pool complex, sport and health club, and on-site dining and is convenient to the area's golf courses, shopping, dining, and other attractions.

Hotel rates are \$63 plus tax or the prevailing government per diem. Call (800) 876-0010 to make reservations. Be sure to ask for rooms in the GeoTools room block to receive the discounted rate.

EXTERNAL COMMITTEE

Ron Birk	NASA Office of Earth Science
Hank Burch	Alabama Department of Conservation and Natural Resources
Bill Burgess	BurGIS consulting
Dave Carter	Delaware Coastal Programs
Chris Chung	Hawaii Coastal Zone Management Program
Lee Danztler	Ocean.U.S. Data Management and Communications
Ivan DeLoatch	U.S. Geological Survey
Claire Drury	Federal Emergency Management Agency (HAZUS work)
Scot Friedman	Texas General Land Office Coastal Division
Tanya Hadad	Oregon Coastal Management Program
Dave Hart	University of Wisconsin
Debra Hernandez	South Carolina Office of Ocean and Coastal Resource Management
Mary Pope Hutson	Land Trust Alliance
Roger Johnson	GIS Chief Cartographer, National Park Service
William Johnson	National States Geographic Information Council
Sarah Johnston	Alabama Department of Conservation and Natural Resources
Debbie Keller	Northwest Florida Greenways Project, The Nature Conservancy
Jeff Lillycrop	Army Corps of Engineers, Mobile District
Dave Mackey	Chief of the Office of Coastal Management
Dr. Larry Mayer	University of New Hampshire, Joint Hydrographic Center
John Palatiello	Management Association for Private Photogrammetric Surveyors
Mark Reichardt	Executive Director Outreach & Adoption Program, OpenGIS Consortium
Tina Shumate	Mississippi Department of Marine Resources
Paul Veisze	California Department of Fish and Game
Dr. Dawn Wright	Oregon State University

PRINCIPAL SPONSOR

NOAA Coastal Services Center, Charleston, South Carolina

EXHIBITORS (as of November 23, 2004)

3001, Inc
Digital Globe, Inc
EarthData
Environmental Careers Organization
Federal Geographic Data Committee
Fugro Pelagos
GIS Solutions, Inc.
I.M. Systems Group
IVS 3D
NOAA Coastal Services Center
Perot Systems Government Services
Photo Science, Inc

CONFERENCE PROCEEDINGS

Conference proceedings will be distributed at the conference to all participants in the form of a CD-ROM. This CD-ROM will include a compilation of short abstracts along with information and summaries for special interest meetings, training, and other sessions.

CONTACTS

General Information:

GeoTools Coordinator, Hamilton Smillie, (843) 740-1192 or *Geo.Tools@noaa.gov*

Registration and Exhibits:

Lynn Sellers, (843) 740-1284 or *Lynn.Sellers@noaa.gov*

For the latest information, see *www.csc.noaa.gov/GeoTools/*.